REMARKS

Applicant respectfully requests reconsideration of the present U.S. patent application. The Specification was objected to for various reasons. Claims 1 stands rejected under 35 U.S.C. § 102 based on admitted prior art. Claims 2-17 stand rejected under 35 U.S.C. § 103. Claims 1, 7 and 12 have been amended. No claims have been canceled or added. Therefore, claims 1-17 remain pending.

Specification Objections

The Specification was objected to for various reasons regarding reference numbers. Applicant has made appropriate amendments to address Examiner's objections.

Claim Rejections - 35 U.S.C. § 102

Rejections of Claim 1 based on Admitted Prior Art

Claim 1 was rejected under 35 U.S.C. § 102 as being anticipated by Admitted Prior Art (Admission). For at least the reasons set forth below, Applicant submits that claim 1 is not anticipated by Admission.

Claim 1 recites the following:

wherein the respective source and drain contacts of the D-mode FET and E-mode FET are coupled to the first layer, and the respective gate contacts of the D-mode FET and E-mode FET are coupled to the single barrier layer.

Admission discloses an integrated circuit that includes a depletion mode (D-mode) field effect transistor (FET) and an enhancement mode (E-mode) FET. Admission also discloses a D-mode barrier layer, a D-mode gate contract, an E-mode barrier layer and a D-mode gate contact. In Admission, the D-mode gate contact is coupled to the D-mode barrier layer, which the E-mode gate contact is coupled to the E-mode barrier layer. In other words, Admission discloses

two barrier layers, with the D-mode gate contact coupled to one of the barrier layers, and the E-mode gate contact coupled to the other barrier layer. Admission does not disclose gate contacts of a D-mode FET and an E-mode FET coupled to a single barrier layer. Thus, Admission fails to disclose at least one limitation of claim 1. Consequently, claim 1 is not anticipated by Admission. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claim 1 under 35 U.S.C. § 102.

Claim Rejections - 35 U.S.C. § 103

Rejections of Claims 2-17 based on Admission in view of *Lai*

Claims 2-17 were rejected under 35 U.S.C. § 103 as being unpatentable over Admission in view of U.S. Patent No. 6,452,221 issued to Lai et al. (*Lai*). For at least the reasons set forth below, Applicant submits that claims 2-17 are not rendered obvious by Admission in view of *Lai*.

As explained above, Admission does not disclose gate contacts of a D-mode FET and an E-mode FET coupled to a single barrier layer, as recited in claim 1. Applicant agrees with the Examiner that Admission fails to disclose all of the limitations of claims 2-17. See Office Action, paragraphs 7 and 8. However, Examiner contends that Admission in view of *Lai* discloses the limitations of claims 2-17.

Lai discloses an enhancement mode FET device that provides a Schottky barrier to inhibit undesirable surface depletion effects. See col. 1, lines 55-68. Applicant does not necessarily agree with Examiner's interpretation of *Lai* as set forth in the Office Action and may choose to address such interpretation in response to other office actions, if necessary. However, regardless of whether the Examiner's interpretation of *Lai* is correct, Examiner does not assert

that *Lai* discloses gate contacts of a D-mode FET and an E-mode FET coupled to a single barrier layer, as recited in claim 1.

Therefore, *Lai* fails to cure the deficiencies of Admission pointed out by Applicant. Thus, Admission in view of *Lai* fails to disclose at least one limitation of claim 1. Consequently, claim 1 is not rendered obvious by Admission in view of *Lai* for at least the above reasons.

Claims 2-6 depend from claim 1. Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claims 2-6 are not rendered obvious by Admission in view of *Lai* for at least the reasons set forth above. Applicant respectfully requests that the Examiner withdraw the rejections of claim 2-6 under 35 U.S.C. § 103.

Claim 7 recites the following:

a depletion mode (D-mode) field effect transistor (FET) and an enhancement mode (E-mode) FET in a multi-layer structure,

wherein the multi-layer structure includes a semiconductor substrate overlaid with a plurality of epitaxial semiconductor layers common to the D-mode and E-mode FETs, including a channel layer overlaid by a single barrier layer overlaid at least by a first layer; ....

Claim 12 recites similar limitations.

As explained above, Admission discloses an integrated circuit that includes a D-mode FET and an E-mode FET, a D-mode barrier layer and an E-mode barrier layer. Admission clearly discloses two barrier layers. Admission does not disclose a D-mode FET and an E-mode FET in a multi-layer structure that includes a channel layer overlaid by a single barrier layer. Thus, Admission fails to disclose at least one limitation of claims 7 and 12.

As explained above, *Lai* discloses an enhancement mode FET device that provides a Schottky barrier to inhibit undesirable surface depletion effects. As also explained above, Applicant does not necessarily agree with Examiner's interpretation of *Lai* and may choose to address such interpretation in response to other office actions, if necessary. However, regardless of whether the Examiner's interpretation of *Lai* is correct, Examiner does not assert that *Lai*

discloses a D-mode FET and an E-mode FET in a multi-layer structure that includes a channel layer overlaid by a single barrier layer, as recited in claims 7 and 12.

Therefore, *Lai* fails to cure the deficiencies of Admission pointed out by Applicant. Thus, Admission in view of *Lai* fails to disclose at least one limitation of claims 7 and 12. Consequently, claim 1 is not rendered obvious by Admission in view of *Lai* for at least the reasons set forth above. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claim 7 and 12 under 35 U.S.C. § 103.

Claims 8-11 depend from claim 7. Claims 13-17 depend from claim 12. Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claims 8-11 and 13-17 are not rendered obvious by Admission in view of *Lai* for at least the reasons set forth above. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claim 8-11 and 13-17 under 35 U.S.C. § 103.

CONCLUSION

For at least the foregoing reasons, Applicant submits that the rejections have been overcome. Therefore, claims 1-17 are in condition for allowance and such action is respectfully solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the application.

Respectfully submitted,

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Joseph A. Pugh
Reg. No. 52,137

TriQuint Semiconductor, Inc.
2300 NE Brookwood Parkway
Hillsboro, OR 97124
(503) 615-9616